ABSTRACT

DEVELOPMENT OF HEIGHT MEASUREMENT SYSTEM USING KINECT

The skeletal framework is a part of the human organs whose metabolism will continue to be active and evolving, bone skeletons also give shape to the body and become the driving force in humans. For that we need a way that can know the growth of skeletal bone in human that is by measuring height. Knowing the development of our height many benefits one of them know Body Mass Index (BMI).

In this Final Project the author will build a system to measure a person's height by using Kinect. Images Objects that successfully caught with Kinect will be processed using Skeletal Tracking method so that the appearance of skeletal framework on the human body. Then the value of height obtained by calculating the distance from the head, neck, waist to the tip of the left leg or right foot.

The Kinect sensor is positioned in front of a user that is set at a distance from 150 cm to 200 cm. Testing was done by taking data of 16 people whose height varied and compared its value with measurement using Stature meter. The results of this test obtained the smallest error value of 0.23% at a distance of 200 cm.

Keywords: Kinect, BMI, *Stature Meter, Skeletal Tracking*.